

IN THE CIRCUIT COURT  
TWENTIETH JUDICIAL CIRCUIT  
ST. CLAIR COUNTY, ILLINOIS

JAMES DOE, a Minor, by and through his )  
Mother and Next Friend, JANE DOE, )  
JANE DOE, individually, and JOHN DOE, )  
)

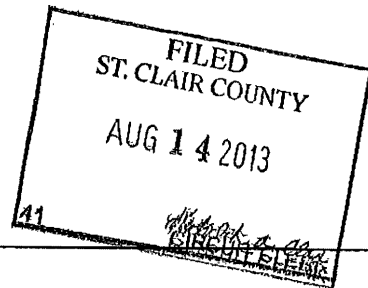
Plaintiffs, )  
)

v. )

Case No: 13L425

SYNGENTA CROP PROTECTION, LLC, )  
SYNGENTA AG, GROWMARK, INC., )  
M&M SERVICE COMPANY, )  
HAMEL SEED & FARM SUPPLY, INC., )  
and ST. CLAIR SERVICE COMPANY, )  
)

Defendants. )  
)



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COMPLAINT

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COME NOW Plaintiffs, JAMES DOE, a Minor, by and through his Mother and Next Friend, JANE DOE, JANE DOE, individually, and JOHN DOE, by and through their undersigned attorneys, and complaining of Defendants, SYNGENTA CROP PROTECTION, LLC, SYNGENTA AG, GROWMARK, INC., M&M SERVICE COMPANY, HAMEL SEED & FARM SUPPLY, INC., and ST. CLAIR SERVICE COMPANY, state:

ALLEGATIONS COMMON TO ALL COUNTS

1. JAMES DOE is a person under the age of 18 years. This action is brought on behalf of JAMES DOE by his Mother and Next Friend, JANE DOE.

2. JAMES DOE is, and at all relevant times has been, a citizen and resident of the State of Illinois.

3. JANE DOE is, and at all relevant times has been, a citizen and resident of the State of Illinois.

4. JOHN DOE is, and at all relevant times has been, a citizen and resident of the State of Illinois.

5. SYNGENTA CROP PROTECTION, LLC ("SCPLLC") is a Delaware Limited Liability Company with its principal place of business at 410 Swing Road, Greensboro, North Carolina, 27419, and is the corporate successor of a Delaware Corporation known as Syngenta Crop Protection, Inc. (SCPI). SCPLLC and SCPI are hereafter referred to collectively as "Syngenta Crop Protection."

6. Syngenta Crop Protection is and at all relevant times has been registered to do business in Illinois, with its registered office in Cook County, Illinois.

7. Syngenta Crop Protection is and at all relevant times has been transacting substantial business in Illinois, including manufacturing, marketing, advertising, selling, distributing and delivering atrazine and other pesticide

(herbicide, insecticide and fungicide) products to distributors, cooperatives, dealers, applicators and farmers located in Illinois, including in St. Clair County, Illinois, conducting field research on atrazine and other pesticide products in Illinois, including in St. Clair County, Illinois, and conducting studies of the contamination of public water systems' raw and finished water by atrazine and other pesticide products in Illinois, including in St. Clair County, Illinois.

8. SYNGENTA AG ("Syngenta AG, or SAG") is a foreign corporation organized and existing under the laws of Switzerland, with its principal place of business at Schwarzwaldallee 215, 4058 Basel, Switzerland.

9. Through its agent/alter-ego, Syngenta Crop Protection, SAG is and at all relevant times has been transacting substantial business in Illinois, including manufacturing, marketing, advertising, selling, distributing and delivering atrazine and other pesticide (herbicide, insecticide and fungicide) products to distributors, cooperatives, dealers, applicators and farmers located in Illinois, including in St. Clair County, Illinois, conducting field research on atrazine and other pesticide products in Illinois, including in St. Clair County, Illinois, and conducting studies of the contamination of public water systems' raw and finished water by atrazine and other pesticide products in Illinois, including in St. Clair County, Illinois.

10. In 2011, the United States District Court for the Southern District of Illinois held that SAG's unusually high degree of control over SCPI subjected SAG

to general jurisdiction in the State of Illinois under the agent/alter-ego theory of personal jurisdiction. *See City of Greenville, Ill. v. Syngenta Crop Prot., Inc.*, 830 F. Supp. 2d 550 (S.D. Ill. 2011). In its thorough Memorandum and Order, the District Court recited in detail the factual bases for its finding, which was made on an extensive record developed through months-long jurisdictional discovery. The highlights of the court's key factual findings supporting jurisdiction are described below. On information and belief, the intimate relationship between SAG and SCPI that led the District Court to find that SAG was subject to jurisdiction in Illinois has not changed in any material respect since SCPI became SCPLLC.

11. SAG is and at all relevant times has been a holding company that owns stock or other ownership interests, either directly or indirectly, in other Syngenta Group companies (in this Complaint, "Syngenta Group" refers collectively to SAG and all of its direct and indirect subsidiaries).

12. One of SAG's direct, wholly-owned subsidiaries is Syngenta Crop Protection AG ("SCPAG"). SCPAG employs and at all relevant times has employed the global operational managers of production, distribution and marketing for the Syngenta Group's Crop Protection ("CP") and Seeds Divisions. The CP and Seeds Divisions are business units through which SAG manages the Syngenta Group's CP and Seeds product lines; however, these business units have no legal, corporate existence.

13. SCPAG directly and wholly owns Syngenta International AG ("SIAG"). SIAG is and at all relevant times has been the nerve center of the entire Syngenta Group. It employs the "Heads" of the CP and Seeds Divisions as well as the "Heads" and senior staff of global corporate functions such as Human Resources, Corporate Affairs, Global Operations, Research and Development, Legal and Taxes, and Finance. Virtually all of these global Heads and senior staff are housed in the same office space in Basel, Switzerland.

14. SAG is the indirect parent of SCPLLC (and was the indirect parent of SCPI), through multiple layers of corporate ownership. SAG directly and wholly owns Syngenta Participations AG, which directly and wholly owns Seeds JV C.V., which directly and wholly owns Syngenta Corporation, which directly and wholly owns Syngenta Seeds, Inc., which directly and wholly owns SCPLLC (and directly and wholly owned SCPI). Before SCPI was converted to SCPLLC, it was incorporated in Delaware, had its principal place of business in North Carolina, and had its own board of directors. SCPI manufactured, tested, marketed, advertised, sold, distributed and/or delivered atrazine and products containing atrazine in Illinois, and SCPLLC has continued to do so. SCPI's sales of all products accounted for more than 17% of the sales for the entire Syngenta group of companies in 2009.

15. SAG has purposefully organized the Syngenta Group, including Syngenta Crop Protection, in such a way as to attempt to evade the authority of

courts in jurisdictions in which it does substantial business. Although the formal legal structure of the Syngenta Group is designed to suggest otherwise, SAG in fact exercises and at all relevant times has exercised control over its country-specific business units, including Syngenta Crop Protection, through a “matrix management” system of functional reporting to global “Product Heads” in charge of the Syngenta Group’s unincorporated Crop Protection and Seeds Divisions, and to global “Functional Heads” in charge of human resources, corporate affairs, global operations, research and development, legal and taxes, and finance.

16. Lines of authority and control within the Syngenta Group do not follow its formal corporate legal structure, but instead follow this global “functional” structure through which SAG controls the actions of its far-flung subsidiaries, including Syngenta Crop Protection.

17. SAG’s Board of Directors has established a Syngenta Executive Committee (“SEC”). The SEC is comprised of employees of Syngenta International AG, including the CEO and many global Heads. John Atkin, the global CP Division Head, and Christoph Maeder, the global Head of the Legal and Taxes function, both serve on the SEC, and served on SCPI’s five-member board of directors. The SEC formulates and coordinates the global strategy and operation of the entire Syngenta Group, and global corporate policies require Syngenta subsidiaries to operate under

the direction and control of the SEC and other unincorporated global management teams.

18. SAG's Board of Directors meets five to six times a year. In contrast, SCPI's board of Directors rarely met, either in person or by telephone. In fact, it met only a handful of times over the last decade before SCPI became SCPLLC. Instead, the SCPI board's actions, including the selection and removal of SCPI's officers, were effected by unanimous written consent pursuant to directions from global or regional managers that were delivered via e-mail to SCPI board members. On information and belief, this practice continues with respect to decisions that are nominally made by the manager(s) of SCPLLC, but are in fact dictated by global management of the Syngenta Group.

19. Similarly, Syngenta Seeds, Inc.'s board of directors appointed and removed SCPI board members at the direction of the Syngenta Group's global management team. On information and belief, the Syngenta Group's global management team continues to control the appointment and removal of the manager(s) of SCPLLC.

20. The CP Division, of which Syngenta Crop Protection is a part, has a structure that is defined not by legal, corporate relationships, but by functional reporting relationships that disregard corporate boundaries. Atop the CP Division is the CP Leadership Team, which includes CP Division Head Atkin, CP region Heads

(including SCPI President Vern Hawkins), and some global corporate function Heads. The CP Leadership Team meets bi-monthly to develop strategy for new products, markets and operational efficiencies and to monitor performance of Syngenta's worldwide CP business.

21. Under the CP Leadership Team are regional leadership teams, including the NAFTA Regional Leadership Team, which oversees the Syngenta Group's U.S., Canadian and Mexican CP business. The NAFTA Regional Leadership Team is chaired by Syngenta Crop Protection's president, and includes employees of Syngenta Crop Protection and the Syngenta group's Canadian and Mexican CP companies. These North American Syngenta entities report to the NAFTA Regional Leadership Team, which reports to the CP Leadership Team, which reports to the SEC, which reports to SAG's Board of Directors.

22. Certain members of the NAFTA Regional Leadership Team, including some Syngenta Crop Protection employees, report directly to the Syngenta Group's global Heads. Global Syngenta Group managers that supervise Syngenta Crop Protection employees participate in those employees' performance reviews and in setting their compensation.

23. In certain cases, the Syngenta Group's functional reporting lines result in employees of parent companies reporting, not just to officers of remote parent



companies or affiliates with no corporate relationship other than through SAG, but to officers of subsidiary companies.

24. Syngenta Crop Protection performs its functions according to its role in the CP Division structure. CP Division development projects are proposed at the global level, ranked and funded at the global level after input from functional entities such as the CP Leadership Team and the NAFTA Regional Leadership Team, and given final approval by the SEC. New CP products are developed by certain Syngenta Group companies or functional groups that manage and conduct research and development functions for the entire CP Division. The products they develop are then tested by other Syngenta entities, including Syngenta Crop Protection, under the direction and supervision of global managers and/or the CP Leadership Team. Syngenta Group companies, including Syngenta Crop Protection, do not contract with each other for such work, or compensate each other for such services; the costs are simply included in the operating budgets of the individual entities—budgets that are established and approved by the Syngenta Group's global product development managers and the SEC.

25. If a product shows promise based on the testing and potential markets, either global or regional leaders (depending on whether the target market is global or regional), not individual companies such as Syngenta Crop Protection, decide

whether to sell a product, and that decision must be approved by the SEC. The products sold all bear the same Syngenta trademark and logo.

26. The atrazine supply chain for the entire Syngenta Group, from specification, sourcing and purchase of raw materials, to manufacturing, through delivery to the customer, is controlled and coordinated globally. Atrazine for global demand is manufactured in a Syngenta Crop Protection plant in St. Gabriel, Louisiana. A member of the SEC and a team that reports to him are responsible for communicating global demand to the St. Gabriel plant; Syngenta Crop Protection then produces atrazine to meet that demand. This SEC member and his team are also responsible for deciding how atrazine is allocated to the Syngenta Group's markets worldwide after it is manufactured. At times, pursuant to decisions made and contracts negotiated not by Syngenta Crop Protection, but at the global level, atrazine to meet global demand has been purchased from non-Syngenta manufacturers in lieu of or in addition to manufacturing it at Syngenta Crop Protection's St. Gabriel plant, regardless of whether the latter approach would be more profitable for Syngenta Crop Protection.

27. Global managers also provide sales and marketing strategies to Syngenta Crop Protection, and on its behalf, have negotiated sales of atrazine to non-Syngenta companies. Because atrazine is a global product, Syngenta Crop

Protection could not decide to stop manufacturing it without approval from CP Division Head Atkin.

28. Syngenta Crop Protection is subject to additional oversight by global managers through a system of "reserved powers" that require Syngenta group companies to seek approval for certain decisions from higher levels within the functional reporting structure.

29. For example, although SAG subsidiaries can handle small legal matters on their own, under the "reserved powers" system, they must get approval from various higher levels in the functional reporting hierarchy when the matters exceed certain thresholds of value or importance. For instance, settlements of certain types of lawsuits must be approved by SAG's Board of Directors if their value exceeds \$60 million.

30. Similarly, appointments of senior managers at Syngenta Crop Protection must be approved by higher levels than the Syngenta Crop Protection's own management, or even ownership; thus, although Syngenta Crop Protection formally appoints its own senior managers, these appointments are in fact merely the rubber-stamping of decisions that have actually been made by the Syngenta Group's global management.

31. Although the Syngenta Group atop which SAG sits attempts to observe the legal formalities necessary to give the appearance that its subsidiaries have the

authority to take action on their own without higher approval, in actual practice, Syngenta Crop Protection takes action only after it has been pre-approved at a higher level. In addition to production, marketing and sales, restrictions on Syngenta Crop Protection's authority to act independently exist in areas including human resources, communications and public affairs, corporate structure and ownership, asset sales and acquisitions, key appointments to boards, committees and management positions, compensation packages, training for high-level positions, finance (including day-to-day cash management) and tax.

32. Under the Syngenta Group's functional management system, global managers initiate and the global Head of human resources oversees international assignments and compensation of managers employed by one Syngenta subsidiary to do temporary work for another Syngenta subsidiary in another country. The international assignment program aims, in part, to improve Syngenta group-wide succession planning by developing corporate talent to make employees fit for higher positions within the global Syngenta group of companies. Under this program, at the instance of global managers, Syngenta Crop Protection are "seconded" to work for other SAG subsidiaries.

33. The Syngenta Group's functional management system also includes a central global finance function – known as Syngenta Group Treasury – for the entire Syngenta group of companies, the finances of which are governed by a global

treasury policy. That policy subordinates the financial interests of SAG's subsidiaries, such as Syngenta Crop Protection, to the interests of the Syngenta Group as a whole. Under this policy, Syngenta Group Treasury controls daily cash sweeps from subsidiaries, holds the cash on account, and lends it to other subsidiaries that need liquidity. This reduces the need of subsidiaries to seek financing from non-Syngenta entities, which is allowed only with the approval of Syngenta Group Treasury. Syngenta Group Treasury also decides whether Syngenta Crop Protection will issue a dividend or distribution to its parent, Syngenta Seeds, Inc., and how much that dividend will be; Syngenta Crop Protection's board or management approves the dividend or distribution mandated by Syngenta Group Treasury without discussion.

34. In light of the facts set forth above, Syngenta Crop Protection and SAG are indistinguishable for purposes of this lawsuit, and are hereafter referred to collectively as "Syngenta."

35. GROWMARK, INC. ("Growmark") is a Delaware corporation with its principal place of business at 1701 Towanda Avenue, Bloomington, Illinois, 61701.

36. Growmark is owned by and participates in the operation of local cooperatives that, under the Growmark-licensed name "FS" and other names, do business throughout the State of Illinois, including St. Clair County, Illinois, for the purpose of selling agricultural products, including products containing atrazine.

37. On information and belief, Growmark distributes and sells and at all relevant times has distributed and sold within the State of Illinois, including St. Clair County, Illinois, atrazine manufactured, distributed and/or sold by Syngenta.

38. M&M SERVICE COMPANY ("M&M Service") is an agricultural cooperative with its principal place of business at 130 N. Chiles St., Carlinville, Illinois, 62626.

39. On information and belief, M&M Service distributes and sells and at all relevant times has distributed and sold within the State of Illinois, including St. Clair County, Illinois, atrazine manufactured, distributed and/or sold by Syngenta.

40. HAMEL SEED & FARM SUPPLY, INC. ("Hamel Seed") is an Illinois corporation with its principal place of business at 7381 W Frontage Rd., Worden, Illinois, 62097.

41. On information and belief, Hamel Seed distributes and sells and at all relevant times has distributed and sold within the State of Illinois, including St. Clair County, Illinois, atrazine manufactured, distributed and/or sold by Syngenta.

42. ST. CLAIR SERVICE COMPANY ("St. Clair Service") is an agricultural cooperative with its principal place of business at 1036 S. Green Mount Road, Belleville, Illinois, 62222-0489.

43. On information and belief, St. Clair Service distributes and sells and at all relevant times has distributed and sold within the State of Illinois, including St. Clair County, Illinois, atrazine manufactured, distributed and/or sold by Syngenta.

44. Atrazine, also known as 2-chloro-4-ethylamino-6-isopropylamino-s-triazine, Chemical Abstracts Service (CAS) Registry Number 1912-24-9, is an herbicide that is used mainly by corn, sorghum, and sugar cane farmers for pre-emergence broad leaf weed control.

45. Defendants market atrazine as advantageous to farmers because, among other things, it does not readily bind to soil. However, this characteristic of atrazine gives it great potential for run-off from the fields to which it is applied into surface waters such as streams, rivers, lakes and reservoirs. This characteristic is particularly problematic for public drinking water supplies that rely on surface water sources of raw water.

46. Atrazine has for many years been one of the most widely used herbicides in Illinois. Millions of pounds of atrazine are applied on farm fields in Illinois annually. Approximately 75% of the field corn acreage grown in Illinois is treated with atrazine.

47. As a result of the volume of atrazine applied and the chemical characteristics that affect its persistence and mobility, atrazine has been found in

surface water, ground water and finished drinking water throughout Illinois in, near and downstream of areas where corn and grain sorghum are grown.

48. Once released into the environment, atrazine is broken down into other chemicals, known as “degradant chemicals” or “degradants”, through microbial action, hydrolysis, dealkylation, dehalogenation, deamination, and photodegradation. Over time, atrazine degradants may become as prevalent as or more prevalent than the parent chemical.<sup>1</sup> Atrazine’s degradants include, but are not limited to, chlorotriazines and hydroxyl triazines. Chlorotriazine degradants include, but are not limited to, deethylatrazine, deisopropylatrazine, and diaminoatrazine. Hydroxyl triazine degradants include, but are not limited to, ammeline, ammelide, N-ethylammelide, N-isopropylammelide, hydroxyatrazine, cyanuric acid, hydroxydeisopropylatrazine, and hydroxydeethylatrazine.

49. The toxicity of atrazine degradants is similar to that of atrazine, and atrazine degradants contribute to the toxicity of atrazine.

50. Atrazine can also react with other chemicals commonly found in water supplies to form additional chemical compounds that are hazardous to humans. For example, atrazine can combine with nitrates—chemical compounds commonly found in public drinking water sources—to form N-nitrosoatrazine, a degradant that is

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<sup>1</sup> USGS, 2006. The Quality of Our Nation’s Waters. Pesticides in the Nation’s Streams and Ground Water, 1992-2001. U.S. Geological Survey. Circular 1291.



more genotoxic than its parent triazine and nitrate compounds.<sup>2</sup> And when atrazine commingles with diazinon—another chemical compound manufactured by Syngenta and distributed, sold and/or applied by Defendants that commonly occurs in public drinking water sources—the neurological toxicity of the product may increase.

51. Atrazine degradant concentrations can be many times higher than concentrations of atrazine itself.<sup>3</sup>

52. Any reference to “atrazine” hereafter shall include both atrazine itself and all atrazine degradant and combination chemicals.

53. Atrazine was first discovered and synthesized by a Syngenta predecessor company in the early 1950s. Syngenta’s predecessor introduced atrazine to U.S. farmers in the 1959 growing season. In the fifty years following atrazine’s introduction, Syngenta became the largest producer and seller of atrazine and atrazine-containing products in the United States.

54. Syngenta manufactures and sells atrazine to other manufacturers and formulators of atrazine-containing products that are registered for sale in Illinois, and manufactures and sells its own line of atrazine-containing products that are registered for sale in Illinois.

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<sup>2</sup> Agency for Toxic Substances and Disease Registry, U.S. Dep’t of Health and Human Servs., Interaction Profile for: Atrazine, Deethylatrazine, Diazinon, Nitrate, and Simazine (Aug. 2006)

<sup>3</sup> USGS, 2006. The Quality of Our Nation’s Waters. Pesticides in the Nation’s Streams and Ground Water, 1992-2001. U.S. Geological Survey. Circular 1291.

55. Some of these products contain both atrazine and what Syngenta refers to as "atrazine related compounds." Throughout this Complaint, any reference to "atrazine" shall include both atrazine itself and atrazine-related compounds, whether in pure chemical form or as an ingredient or byproduct in an herbicide product.

56. Syngenta's reported revenue from herbicides, including atrazine, exceeded \$2.4 billion in 2008.

57. At all relevant times, and years before the specific contamination complained of in this action, Defendants knew or in the exercise of ordinary care should have known that atrazine does not readily bind to soil, has limited solubility in water, is not easily broken down by biological or photo-decomposition, and because of its resulting persistence and mobility, has a propensity to run off into surface water.

58. At all relevant times, and years before the specific contamination complained of in this action, Defendants knew or in the exercise of ordinary care should have known that atrazine's chemical characteristics cause it to contaminate public water supplies that rely on surface waters such as rivers, lakes and reservoirs as sources of raw water.

59. At all relevant times, and years before the specific contamination complained of in this action, Defendants knew or in the exercise of ordinary care

should have known that once applied to fields, atrazine breaks down into, and combines with, other chemicals in the environment.

60. At all relevant times, and years before the specific contamination complained of in this action, Defendants knew or in the exercise of ordinary care should have known that even when atrazine is used as intended and as directed, atrazine can and does contaminate rivers, lakes and reservoirs on which public water supplies rely as sources of raw water.

61. Long after water testing data confirmed that atrazine was contaminating rivers, lakes and reservoirs on which public water supplies rely as sources of raw water, Defendants continued to manufacture, distribute, sell and/or apply atrazine for use on fields throughout the State of Illinois.

62. Atrazine is and has long been the most commonly detected herbicide in surface water in the United States. Between 1992 and 2001, atrazine and its degradants were detected in more than 75 percent of stream samples in agricultural areas across the United States.<sup>4</sup>

63. Atrazine's frequent detection in streams, rivers, lakes, reservoirs and ground water is related directly to its volume of usage and its tendency to persist in soils and move with water.

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<sup>4</sup> Gilliom RJ, et al. 2006. The Quality of Our Nation's Waters: Pesticides in the Nation's Streams and Ground Water, 1992-2001. U.S. Geological Survey. Circular 1291.

64. Atrazine's contamination of surface water occurs when atrazine is used as intended and as directed by Defendants.

65. Atrazine's propensity to contaminate surface and drinking water has resulted in the banning of atrazine in other parts of the world. Italy and Germany, two major corn-producing countries, banned atrazine in 1991. Sweden, Denmark, and Finland followed suit and banned atrazine in 1994. In 2005, all remaining European Union nations banned atrazine because it consistently contaminated water supplies.

66. Since at least as early as 1993, Syngenta has been testing the raw and finished water of public water supplies throughout the United States, including Illinois and St. Clair County, Illinois.

67. In 2003, in connection with an EPA-mandated Ecological Watershed Monitoring Program, Syngenta identified 1,172 watersheds at high risk of atrazine contamination across the United States, primarily in corn producing states.

68. Because of its significant corn production, Illinois' streams, rivers, lakes and reservoirs have been contaminated by atrazine for decades.

69. Syngenta has for many years had testing data showing that atrazine concentrations in surface water peak during the spring planting months when atrazine use is most prevalent, but did not timely inform the public, including

Plaintiffs, of the data in its possession showing the peaks, or “spikes”, in raw and finished water contamination levels resulting from this seasonal variation.

70. The non-Syngenta Defendants also knew or should have known at all relevant times that atrazine is typically applied to farm fields in Illinois in springtime, resulting in spikes in raw and finished water contamination levels during this time of year. Said Defendants knew or should have known of such seasonal spikes in atrazine contamination for years before the specific contamination complained of in this action, but did not warn Plaintiffs or the public about the risks from such spikes of atrazine in public drinking water.

71. From atrazine’s initial introduction to this day, Syngenta has continuously and repeatedly denied any connection between exposure to atrazine and adverse human health effects. Syngenta has vigorously denied, and continues to deny, that atrazine poses a threat to human health at levels commonly found in drinking water in Illinois. Syngenta has also vigorously fought and continues to fight against the performance of safety studies on human health effects of atrazine at levels commonly found in drinking water in Illinois, and has successfully opposed and continues to oppose any further restrictions on the use of atrazine products.

72. Not only has Syngenta denied the link between atrazine and human health effects, it also has actively manipulated the weight of scientific evidence by

funding deceptive and misleading scientific studies. Syngenta has also altered and suppressed scientific findings linking atrazine to adverse health effects.

73. Recent objective scientific studies have begun to unmask the true dangers associated with exposure to atrazine at levels commonly found in public drinking water. For example, a July 2009 study published in *Environmental Health Perspectives* found that atrazine in drinking water during the third trimester and the entire pregnancy was associated with a significant increase in the prevalence of infants born small-for-gestational-age (SGA). Atrazine in drinking water above 0.1 parts per billion (ppb) during the third trimester was found to be associated with a 17-19% increase in the prevalence for SGA compared to the control group (< 0.1 ppb), and mean atrazine concentrations over the entire pregnancy above 0.644 ppb were found to be associated with higher SGA prevalence than in the control group.<sup>5</sup>

74. Another 2009 study, published in *Acta Paediatrica*, studied 30.11 million births. This study found a statistically significant association between mothers' consumption of water in April through July, the months during which the highest concentrations of nitrates, atrazine, and other pesticides in surface water occurred, and higher birth defects. In other words, this study found that seasonal

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<sup>5</sup> Ochoa-Acuna, et.al, (2009). Drinking Water Herbicide Exposure in Indiana and Prevalence of Small-for-Gestational-Age and Preterm Delivery. *Environmental Health Perspectives*. 117(10): 1619-1624.

peaks in environmental contaminants such as atrazine during critical time periods before and after conception are linked to certain birth defects.<sup>6</sup>

75. As early as 1997, France severely limited the use of atrazine. In 2002, it banned many atrazine-containing products, and in 2003 banned atrazine-containing products altogether. But atrazine and its degradates persisted in drinking water for years after these bans took effect. In 2006, in the Brittany region of France, the maximum measured surface water concentration of atrazine was .38 ppb, and of hydroxyatrazine was .37 ppb. Groundwater concentrations of atrazine measured .14 ppb, of hydroxyatrazine measured .38 ppb, and of deethylatrazine measured .32 ppb. Overall, in 2007, atrazine degradates were measured in 20% of the drinking water sampled. French women who consumed atrazine-laced drinking water from 2002–2006 participated in an epidemiologic study designed to determine whether an association existed between atrazine and birth defects. Despite the bans on atrazine use, atrazine and its degradant chemicals were detected frequently in the urine of these pregnant women. And when atrazine was detectable in the urine, there was a 50% greater chance that the baby would have fetal growth restriction, and a 70% greater chance that the baby's head circumference would be small for sex and gestational age.<sup>7</sup>

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<sup>6</sup> Winchester, et al. (2009) Agrichemicals in Surface Water & Birth Defects in the United States. *Acta Paediatrica* 98, 664-669.

<sup>7</sup> Chevrier, *et al.*: Urinary Biomarkers of Prenatal Atrazine Exposure and Adverse Birth Outcomes in the PELAGIE Birth Cohort. (available online at <http://dx.doi.org/>) March 2, 2011.

76. A recent study found consistent associations between medium-low and/or medium levels of estimated periconceptional (during the period from before conception to early pregnancy) maternal residential atrazine exposure and every male genital malformation category evaluated, including hypospadias.<sup>8</sup> These findings were consistent with the non-traditional dose-response curve that has been observed to be associated with exposure to endocrine-disrupting chemicals. These results added to a growing body of scientific evidence regarding the harmful effects of atrazine on the developing male reproductive system.

77. Despite the findings of these recent studies, Syngenta continues to “stand[] firmly behind the safety of atrazine.”<sup>9</sup>

78. In humans, sex determination is the formation of a testis and ovary from the sexually-indifferent genital ridge. This process is hormone-independent. Once the gonad has formed and the relevant cell types have differentiated, hormones take over the next steps of “sexual differentiation,” or “masculinization” in the male. These stages of development are highly susceptible to influence from endocrine-disrupting chemicals, which alter the effects of hormones in the human body and have pronounced effects at extremely low levels of concentration.

79. An endocrine-disrupting substance is a compound which through environmental or inappropriate developmental exposures alters the hormonal and

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<sup>8</sup> Agopian, *et al.*: Case-Control Study of Maternal Residential Atrazine Exposure and Male Genital Malformations. *Am J Med Genet A*. 2013 May;161(5):977-82.

<sup>9</sup> [www.syngentacropprotection.com](http://www.syngentacropprotection.com).



homeostatic systems that enable the organism to communicate with and respond to its environment.

80. Unlike other chemicals and toxicants in our environment, which require high levels to cause toxic and lethal effects, the negative impacts of endocrine-disrupting chemicals like atrazine have been observed at very low doses that are frequently seen in the environment.

81. Atrazine is an endocrine-disrupting chemical that adversely affects testosterone production. Syngenta knew or should have known that atrazine is an endocrine-disrupting chemical for years before the specific contamination and injuries complained of in this action, but publicly denied that scientific fact.

82. Male genital development depends on the conversion of testosterone to 5 $\alpha$ -dihydrotestosterone or estradiol within target tissues through the enzymatic activity of 5 $\alpha$ -reductase or aromatase. Endocrine disruptors such as atrazine can block the activity of these enzymes, thereby affecting the process of development.

83. Hypospadias is a birth defect in which the opening of the urethra is on the underside of the penis instead of at the end. Compared with healthy children, boys born with hypospadias more often have additional congenital anomalies.

84. Hypospadias occurs when there is insufficient testosterone, the primary androgen, during penile development. Androgens are male sex hormones produced by the adrenal glands and testes, the male sex glands. Anti-androgens are

any substance capable of inhibiting the biological effects of androgenic hormones on responsive tissues.<sup>10</sup>

85. Delicate surgery is the only way to repair hypospadias. Boys who require surgical correction of this defect may encounter severe medical, social, and sexual problems later in life.

86. Atrazine reduces androgen synthesis and action through multiple mechanisms. It increases the activity of the enzyme aromatase, which converts testosterone to estrogen, leading to increased estrogenic activity relative to testosterone activity and permanent changes in the male reproductive system. It also reduces the activity of the enzyme 5 alpha-reductase, which forms an active metabolite of testosterone.

87. The effects of prenatal increased aromatase activity and decreased 5 alpha-reductase activity disrupt the estrogen-androgen balance, and adversely affect male reproductive system development. Because it both activates aromatase and inhibits 5 alpha-reductase, atrazine has a 'double whammy' effect on levels and ratios of serum hormones, like testosterone.

88. The human embryo has almost no defense systems against chemicals, and no ability to respond to chemical concentrations early in development. The

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<sup>10</sup> Kniewald et al., Indirect influence of s-triazines on rat gonadotropic mechanism at early postnatal period. J Steroid Biochem. 1987;27(4-6):1095-100; Kniewalk et al., Effect of s-triazine compounds on testosterone metabolism in the rat prostate. J Appl Toxicol. 1995 May-Jun;15(3):215-8; Danzo, Environmental xenobiotics may disrupt normal endocrine function by interfering with the binding of physiological ligands to steroid receptors and binding proteins. Environ Health Perspect. 1997 Mar;105(3):294-301.

systems that detoxify and excrete chemicals from the human body are not fully developed in the human embryo, causing them to be particularly vulnerable to the effects of endocrine disrupting chemicals like atrazine.

89. Exposures to endocrine disruptors when cells are multiplying and differentiating into specific tissues and organs in a developing human embryo create the risk of permanent, life-altering damage. During critical stages of human prenatal development of organs and bodily systems, the embryo and fetus are even more vulnerable to permanent damage from exposure to endocrine disruptors.

90. No scientific evidence exists for a lower limit, or threshold concentration, of atrazine in drinking water, or for a dose of atrazine in the embryo or fetus, below which there could be no adverse effect on embryonic or fetal development. In other words, there is no scientific basis for estimating safe levels of atrazine exposure during fetal development periods.

91. At all relevant times, the non-Syngenta Defendants distributed, sold and/or applied atrazine designed, manufactured, distributed and/or sold by Syngenta that was applied to farmers' fields in the watersheds of surface-water public water systems from which Jane Doe obtained drinking water. As a direct and proximate result of the application of atrazine to these fields, the water that Jane Doe drank before and while she was pregnant with JAMES DOE was contaminated with atrazine.

92. At all relevant times, Defendants knew or in the exercise of ordinary care should have known that their atrazine products would be applied to fields in the watersheds of surface-water public water systems and would run off into surface waters used as public drinking water sources.

93. Acting in concert with other manufacturers, distributors, dealers and applicators of atrazine products, Defendants aided and abetted the contamination of public drinking water in Illinois, including Jane Doe's drinking water before and during her pregnancy, by those other manufacturers, sellers, distributors and applicators.

94. Defendants have knowingly and actively concealed the true threat that atrazine poses to the public. Defendants have affirmatively and deliberately represented that atrazine use is safe and does not present serious health consequences to humans at levels commonly found in raw drinking water, thereby fraudulently concealing atrazine's true dangerous nature.

95. Defendants' fraudulent concealment could not have been discovered by Plaintiffs even in the exercise of due diligence. Plaintiffs did not have the ability to challenge Syngenta's assurances regarding atrazine's safety. Only sophisticated entities capable of performing epidemiologic and scientific investigations have the resources to uncover the truth about atrazine. Fortunately, independent scientific researchers have begun to unveil the true effects of this chemical. It was reasonable

for Plaintiffs and other members of the public to rely on Defendants' express or implied representation that atrazine does not pose a threat to human health at levels commonly found in raw drinking water.

96. Throughout her pregnancy, Jane Doe drank tap water provided by an Illinois public water system whose surface-water source of raw water was contaminated with atrazine designed, manufactured, distributed, sold and/or applied by Defendants or others with whom Defendants acted in concert.

97. Jane Doe gave birth to JAMES DOE on January 3, 2007.

98. As a direct and proximate result of his mother's drinking water having been contaminated with atrazine, JAMES DOE was born with hypospadias.

99. Immediately after his birth, JAMES DOE required surgery to repair the urethra.

100. JAMES DOE was hospitalized for two weeks after his hypospadias corrective surgery, and required further care from his pediatrician.

101. The hypospadias with which JAMES DOE was born as a result of Jane Doe's exposure to atrazine before and during her pregnancy has caused JAMES DOE physical and emotional pain and suffering, and is reasonably certain to continue to do so in the future.

102. Illinois has a strong public policy against an unhealthful environment. Under Article XI of the Illinois Constitution of 1970, Section I:

"The public policy of the State and the duty of each person is to provide and maintain a healthful environment for the benefit of this and future generations. The General Assembly shall provide by law for the implementation and enforcement of this public policy."

Under Section 2 of Article XI, Rights of Individuals:

"Each person has the right to a healthful environment. Each person may enforce this right against any party, governmental or private, through appropriate legal proceedings subject to reasonable limitation and regulation as the General Assembly may provide by law."

103. Syngenta knew or should have known that atrazine is an anti-androgen. At no time has Syngenta disclosed this fact to Plaintiffs or the public.

COUNT I  
(PUBLIC NUISANCE)

104. Plaintiffs re-allege and incorporate by reference paragraphs 1 through 103 of this Complaint.

105. At all relevant times, Jane Doe, and through her, JAMES DOE, was the lawful and actual possessor of property, specifically household drinking water, with all rights incident thereto.

106. Defendants knew at all relevant times that atrazine is persistent, does not readily bind to soil, and as a result runs off into surface waters such as streams, rivers, lakes, and reservoirs.

107. Defendants knew and intended at all relevant times that their atrazine products would be used by farmers within the watersheds of surface waters used as sources of public drinking water.

108. Defendants knew at all relevant times that their atrazine would contaminate surface waters used as sources of public drinking water even when atrazine was applied as designed, intended, and directed or in a reasonably foreseeable manner.

109. Despite this knowledge, Defendants designed, manufactured, distributed, sold and/or applied their atrazine products for agricultural use, knowing that these products, when applied and used as designed, intended and directed, or in a reasonably foreseeable manner, would physically invade public drinking water sources, including the source of Plaintiffs' drinking water.

110. As a direct and proximate result of this intentional and/or negligent conduct by Defendants, their atrazine contaminated Illinois drinking water sources, including the source of Jane Doe's drinking water before and during her pregnancy with JAMES DOE. As long as Defendants' atrazine continues to be manufactured, distributed, sold and applied in the same form, Defendants' contamination of public drinking water is substantially certain to continue in the future.

111. Defendants' past, present, and future contamination of Plaintiffs' and the Illinois public's drinking water constitutes a continuous, substantial, and unreasonable interference with the public's use and enjoyment of that water because atrazine is injurious to health and offensive to the senses. The public relies on public drinking water to be clean and free of harmful contaminants. Public drinking water



suppliers derive the drinking water they provide to their customers from raw water sources that are contaminated by Defendants' atrazine. Because JAMES DOE has been injured by the adverse health effects of atrazine consumed by Jane Doe during her pregnancy with JAMES DOE, and because Jane Doe and John Doe have become and are reasonably likely in the future to become liable for medical expenses incurred on behalf of JAMES DOE, Plaintiffs have suffered distinct injuries separate from the public at large.

112. At all relevant times, Defendants knew or in the exercise of ordinary care should have known that their atrazine products were persistently contaminating Illinois public drinking water sources and causing a continuous, substantial, and unreasonable interference with Plaintiffs' and the Illinois public's use and enjoyment of that water. Defendants also knew or in the exercise of ordinary care should have known that human consumption of atrazine through drinking water posed a grave public health threat. Yet Defendants continued to manufacture, distribute, sell and/or apply atrazine in the same form. Defendants acted with a reckless disregard for the public's health and well-being, and Defendants' conduct was willful, wanton, and malicious in that:

- a. Syngenta knew that human consumption of atrazine at levels commonly found in drinking water posed a threat to public health, including the risk of birth defects and other adverse health effects like hypospadias, but refused to disclose this threat to the public;



- b. Syngenta has actively manipulated the weight of scientific evidence by funding deceptive misleading scientific studies, and has altered and suppressed scientific findings linking atrazine to adverse health effects.
- c. Defendants knew that their atrazine breaks down into degradant chemicals, that those degradant chemicals contaminate public drinking water, and that those degradant chemicals are often as toxic, or more toxic, than the parent atrazine compound. Despite this knowledge, Defendants did not inform Plaintiffs or other members of the public of the public health threat posed by their presence in drinking water;
- d. Defendants knew that the public, including Plaintiffs, was unaware of the increased levels of atrazine contamination in drinking water from springtime application on farming fields. Despite this knowledge, Defendants did not inform the public or Plaintiffs of these high contamination levels or of the seasonal variation of atrazine contamination of raw water sources.

113. As a direct and proximate result of the foregoing acts or omissions on the part of Defendants, their agents, servants and/or employees, JAMES DOE has sustained a severe and permanent birth defect; has suffered great physical pain, mental anguish, disfigurement and disability and will continue to so suffer the same for the remainder of his life; and will incur medical expenses in the future; and Jane Doe and John Doe have become and will become liable under the Family Expense Statute, 750 ILCS 65/15, for medical expenses of JAMES DOE

WHEREFORE, Plaintiffs pray that the Court enter judgments in their favor and against Defendants in amounts sufficient to confer jurisdiction on the Circuit Judge Division of this Court, plus costs of suit.

COUNT II  
(STRICT LIABILITY)

114. Plaintiffs re-allege and incorporate by reference paragraphs 1 through 103 of this Complaint.

115. At all times relevant to this action, Defendants designed, manufactured, distributed, sold and/or applied atrazine and atrazine-containing products. Syngenta designed atrazine to resist binding to soil and to easily run off into surface waters such as streams, rivers, lakes, and reservoirs. Syngenta also designed atrazine such that it has certain chemical characteristics that make it hazardous to human health. Atrazine possessed these design features at the time it left Defendants' control.

116. Defendants owed a duty to all persons that their atrazine might foreseeably harm, including Plaintiffs, to avoid designing, manufacturing, distributing, selling and/or applying any product that was unreasonably dangerous for its intended and foreseeable uses.

117. When Defendants manufactured and/or placed atrazine and atrazine-containing products into the stream of commerce in the United States and Illinois, those products were in a defective condition unreasonably dangerous for their intended and foreseeable uses for the following reasons:

- a. Atrazine has limited solubility in water and is recalcitrant to biodegradation;

- b. Atrazine and herbicides containing atrazine have a tendency to mix with groundwater and surface water and migrate great distances;
- c. Surface water containing even small amounts of atrazine and herbicides containing atrazine has a propensity to contaminate streams, rivers, lakes, and reservoirs that serve as sources of raw water for public water supplies;
- d. Drinking water containing atrazine is hazardous to human health;
- e. Atrazine at levels commonly found in public drinking water poses a threat to public health, including the risk of birth defects and other adverse health effects like hypospadias;
- f. Atrazine causes birth defects at levels commonly found in drinking water, but Defendants did not warn Plaintiffs or the public of this human health threat;
- g. Once atrazine is applied to farm fields it breaks down into degradant chemicals, those degradant chemicals contaminate public drinking water, and those degradant chemicals are often as toxic, or more toxic, than the parent atrazine compound;
- h. Atrazine breaks down to even more toxic degradant chemicals, but Defendants did not warn Plaintiffs or the public of the health threat posed by their presence in drinking water;
- i. Though Defendants knew about high seasonal atrazine levels in public drinking water sources, they failed or refused to warn Plaintiffs or the public of the health risks associated with high seasonal contamination levels in drinking water sources.
- j. Defendants failed to warn Plaintiffs or the public of the adverse synergistic effects of atrazine on human health when atrazine mixes with other chemicals in the environment;
- k. As designed and when used as intended, atrazine is an endocrine disruptor. As an endocrine disruptor, atrazine causes

a hormonal imbalance in the male reproductive system when consumed through dietary water, particularly in a developing male reproductive system;

- l. As designed and when used as intended, atrazine is an anti-androgen. As an anti-androgen, atrazine causes decreased levels of testosterone which causes harm to the developing male reproductive system when consumed through dietary water;
- m. Defendants failed to warn Plaintiffs or the public that atrazine is an endocrine disrupter with anti-androgenic effects causing decreased levels of testosterone which causes harm to the developing male reproductive system;
- n. Defendants failed to warn Plaintiffs or the public of the potential adverse human birth outcomes from exposure to environmentally relevant doses of atrazine metabolite mixtures in drinking water;
- o. Defendants failed to warn Plaintiffs or the public of the adverse synergistic effects of atrazine on human health when atrazine mixes with other chemicals in the environment.

118. Defendants' atrazine products were used in a manner that Defendants intended and directed them to be used or in a manner that was reasonably foreseeable to Defendants.

119. All of Plaintiffs' injuries and damages were directly and proximately caused by the defective condition of Defendants' atrazine products that existed at the time those products left Defendants' control.

120. At all relevant times, Defendants were aware that their defective atrazine products could cause substantial damage to Plaintiffs and members of the public. Yet Defendants continued to manufacture, market, sell and/or apply

atrazine products in the same form. Defendants acted intentionally and with a reckless disregard for the health and safety of members of the public, including Plaintiffs. At all times relevant to this matter, Defendants' conduct was willful, wanton, and malicious.

121. As a direct and proximate result of the foregoing acts or omissions on the part of Defendants, their agents, servants and/or employees, JAMES DOE has sustained a severe and permanent birth defect; has suffered great physical pain, mental anguish, disfigurement and disability and will continue to so suffer the same for the remainder of his life; and will incur medical expenses in the future; and Jane Doe and John Doe have become and will become liable under the Family Expense Statute, 750 ILCS 65/15, for medical expenses of JAMES DOE

WHEREFORE, Plaintiffs pray that the Court enter judgments in their favor and against Defendants in amounts sufficient to confer jurisdiction upon the Circuit Judge Division of this Court, plus costs of suit.

COUNT III  
(NEGLIGENCE)

122. Plaintiffs re-allege and incorporate by reference paragraphs 1 through 103 of this Complaint.

123. At the time they manufactured, distributed, sold and/or applied atrazine, Defendants could reasonably foresee that due to atrazine's design and the

manner and place of its intended use, atrazine would contaminate public drinking water supplies.

124. At the time they manufactured, distributed, sold and/or applied atrazine, Defendants could reasonably foresee that atrazine at levels commonly found in drinking water posed a threat to public health, including the risk of birth defects and other adverse health effects like hypospadias.

125. At the time they manufactured, distributed, sold and/or applied atrazine, Defendants knew or could reasonably have foreseen that once atrazine is applied to farm fields it breaks down into degradant chemicals, those degradant chemicals contaminate public drinking water, and those degradant chemicals are often as toxic, or more toxic, than the parent atrazine compound.

126. At the time they manufactured, distributed, sold and/or applied atrazine, Defendants knew or could reasonably have foreseen that Plaintiffs and the public were not aware of the extent of atrazine's contamination of public drinking water and the large seasonal variation in atrazine levels due to spring time planting.

127. Defendants owed a duty to Plaintiffs and the public to avoid contaminating drinking water with atrazine.

128. Defendants breached their duty to Plaintiffs by:

- a. Designing, manufacturing, distributing, selling and/or applying atrazine containing products which they knew or should have

known would run off farm fields and contaminate public drinking water supplies;

- b. Designing, manufacturing, distributing, selling and/or applying atrazine containing products which they knew or should have known would break down into degradant chemicals, that those degradant chemicals contaminate public drinking water, and that those degradant chemicals are often as toxic, or more toxic, than the parent atrazine compound;
- c. Designing, manufacturing, distributing, selling and/or applying atrazine containing products when they knew or should have known that atrazine is an endocrine disruptor with anti-androgenic effects causing decreased levels of testosterone in the developing male reproductive system;
- d. Failing to adequately test atrazine's propensity to run off farming fields and its persistence in water and soil, when such testing would have made it reasonably foreseeable that atrazine would contaminate public drinking water, including drinking water consumed by Jane Doe;
- e. Failing to conduct reasonable and appropriate scientific research to evaluate the potential human health hazards of atrazine when consumed through drinking water, despite knowing or reasonably foreseeing that atrazine would contaminate drinking water;
- f. Failing or refusing to avoid further contamination of public raw drinking water sources after discovering that atrazine contaminated, and would continue to contaminate public drinking water, including drinking water consumed by Jane Doe;
- g. Failing or refusing to disclose to the public, including Plaintiffs, that human consumption of atrazine at levels commonly found in drinking water posed a serious threat to human health, particularly when consumed by pregnant women;
- h. Failing or refusing to disclose to the public, including Plaintiffs, that human consumption of atrazine at levels commonly found in drinking water posed a threat to public health, including the



risk of birth defects and other adverse health effects like hypospadias;

- i. Failing or refusing to inform members of the public, including Plaintiffs, of the health threat posed by the presence of atrazine degradant chemicals in drinking water, despite Defendants' knowledge that their atrazine breaks down into degradant chemicals, that those degradant chemicals contaminate public drinking water, and that those degradant chemicals are often as toxic, or more toxic, than the parent atrazine compound;
- j. Failing or refusing to warn the public, including Plaintiffs, of the health risks associated with high seasonal contamination levels in drinking water sources, despite Defendants' knowledge of high seasonal atrazine levels in public drinking water sources;
- k. Though Syngenta knew of the public health threat caused by the presence of its atrazine in drinking water, Syngenta actively manipulated scientific studies regarding atrazine's health effects by funding deceptive and misleading scientific studies, and by altering or suppressing scientific study results in order to conceal atrazine's true threat to public health;
- l. Despite Syngenta's knowledge that atrazine is an endocrine disruptor with anti-androgenic effects causing decreased levels of testosterone, Syngenta failed to adequately investigate atrazine's effects on the developing male reproductive system or suppressed the publication of such test results;
- m. Defendants have failed to adequately investigate the potential adverse human birth outcomes from exposure to environmentally relevant doses of atrazine metabolite mixtures in drinking water;
- n. Defendants have failed to adequately investigate the adverse synergistic effects of atrazine on human health when atrazine mixes with other chemicals in the environment;

129. As a direct and proximate result of the foregoing acts or omissions on the part of Defendants, their agents, servants and/or employees, JAMES DOE has



sustained a severe and permanent birth defect; has suffered great physical pain, mental anguish, disfigurement and disability and will continue to so suffer the same for the remainder of his life; and will incur medical expenses in the future; and Jane Doe and John Doe have become and will become liable under the Family Expense Statute, 750 ILCS 65/15, for medical expenses of JAMES DOE

WHEREFORE, Plaintiffs pray that the Court enter judgments in their favor and against Defendants in amounts sufficient to confer jurisdiction on the Circuit Judge Division of this Court, plus costs of suit.

Respectfully submitted,

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